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IN THE SPECIFICATION

At page 1, before "BACKGROUND OF THE INVENTION," please insert the following new paragraph:

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of foreign priority under 35 USC §119(a) to Taiwan, R.O.C Application Serial No. 90113920, filed June 8, 2001.

Please replace paragraph [0002] with the following replacement paragraph:

[0002] Due to rapid development of multi-media systems, there is a demand for images with a higher resolution. To increase image resolution, the number of light-sensitive cells (such as charge coupled device (CCD)) in the sensing device of a scanner must increase correspondingly.

Please replace paragraph [0015] with the following replacement paragraph:

[0015] FIG. 1 is a block diagram showing a scanning device capable of saving compensation memory according to one preferred embodiment of this invention. As shown in FIG. 1, the scanning device includes an input device 10, an application specific integrated circuit 16, a compensation memory unit 18, an image memory unit 20 and an input/output interface 22. The input device 10 further includes a sensing device 12 and an analogue/digital converter 14.

Please replace paragraph [0016] with the following replacement paragraph:

[0016] The sensing device 12 couples with the analogue/digital converter 14. The analogue/digital converter 14 couples with the application specific integrated circuit 16. The compensation memory unit 18, the image memory unit 20 and the input/output interface 22 all ~~couples~~ couple with the application specific integrated circuit 16.

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Please replace paragraph [0017] with the following replacement paragraph:

[0017] FIG. 2 is a schematic diagram of an alternative-sensing device for holding compensation data according to one preferred embodiment of this invention. In this embodiment, [[an]] the alternative-sensing device [[is]] of FIG. 2 may be used as the sensing device 12 of FIG. 1. Before the scanning device scans an image object, a compensation procedure is performed. In general, white is used as a compensation color. When the scanning device is conducting a compensation procedure, CCD cells 1x.about.Nx (FIG. 2) of the sensing device 12 of FIG. 1 will convert the sensed light intensity into respective currents and transfer to the storage electrodes for producing signal charges. The charges are then transformed to appropriate voltage differential. The alternative-sensing device uses such procedure to perform an alternate scanning of the compensation white so that a multiple of alternative scanning pixels are output to the analogue/digital converter 14 of FIG. 1. In addition, a linear sensing device similar to the one shown in FIG. 3 may also be used as the sensing device 12 of FIG. 1.

Please replace paragraph [0018] with the following replacement paragraph:

[0018] As the analogue/digital converter 14 of FIG. 1receives the alternately scanned image pixels, alternate scanned pixels in an analogue format are digitized into even data values and odd data values. Thereafter, the even data values and the odd data values are transferred to the application specific integrated circuit 16 of FIG. 1.

Please replace paragraph [0019] with the following replacement paragraph:

[0019] The application specific integrated circuit 16 of FIG. 1receives the even data values and the odd data values. After performing a computation using the even data values, the odd data values and preset values, the application specific integrated circuit 16 of FIG. 1 averages out the even compensation values and the odd compensation values to produce averaged odd-even compensation values. The averaged odd-even compensation values are stored inside the compensation memory unit

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18 of FIG. 1. For example, when one of the even 2x CCD cells and one of the odd 1x CCD cells scan an image pixel, optical data are converted into an even data value=250 and an odd data value=262 via the analogue/digital converter. The application specific integrated circuit 16 of FIG. 1 receives both the even data value and the odd data value. Inside the application specific integrated circuit [[15]] 16 of FIG. 1, a preset value=255 is subtracted from the even value data=250 to produce an even compensation value=-5. Similarly, a preset value=255 is subtracted from the odd value data=262 to produce an odd compensation value=7. Thereafter, the even compensation value and the odd compensation value are averaged ((even compensation value=-5+odd compensation value=7)/2) to produce an averaged odd-even compensation value=1. Finally, the averaged odd-even compensation value is transferred to the compensation memory unit 18 of FIG. 1. In this embodiment, compensation white is used as color compensation. Hence, the preset value is 255.

Please replace paragraph [0020] with the following replacement paragraph:

[0020] After performing the compensation procedure, the scanning device starts to scan an object document. The even 2x CCD cells and the odd 1x CCD cells scan image pixels and the optical data are converted into even data values and odd data values by the analogue/digital converter 14 of FIG. 1. The resultant data values are transferred to the application specific integrated circuit 16 of FIG. 1. At this stage, the averaged odd-even compensation value=1 is retrieved from the compensation memory unit 18 of FIG. 1. After adding the averaged odd-even compensation value to the even data value and the odd data value, a pair of image values is output to the image memory unit 20 of FIG. 1. The odd and even image values reside in the image memory unit 20 of FIG. 1 until they are required by the input/output interface 22 of FIG. 1. When such moment arrives, the application specific integrated circuit 16 of FIG. 1 reads out the pair of image values from the image memory unit 20 of FIG. 1 and sends them to the input/output interface 22 of FIG. 1.

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